IAI's Lahav Division is the Kfir aircraft Original Manufacturer (OEM) with full design authority and is responsible for the aircraft development, production and upgrade.

Lahav has the capability to use existing airframes that flew 200-500 hours in IAF, Fully strip them, replace all that Lahav as OEM decides, and provide an aircraft with 8000 hours and over 30 years flight potential, with Manufacture guarantee.

Flights test for new Avionics, Radar, Targeting Pod, BVR EM missiles, GPS and autonomous bombs and for the aircraft post all airframe changes

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Kfir Colombia program 2010

Provide to customer aircraft with 8000 hours flight potential on body and systems.

Full wiring replacement and other systems replacement as required by OEM.

Updated Avionics & Sensors designed in 2010

24 Aircraft – Half supplied by OEM, and modernization of 12 existing Kfir's at Colombia Air force

80-120% of 4th Gen. A/C (such as F16 block 52, Euro fighter, Rafal, MIG-29) capabilities

Development, Integration of new armaments, sensors, 100 flight tests, including launch of SPICE A/G GPS/TV guided autonomous bomb.

3 years – full delivery (development and serial) !

Highly Operational with 24/7 all weather A/G attacks.

High availability.

Following the successful modernization program, the the Colombians and the Kfirs received a Prestigious Invitation to RED FLAG exercise in Nelis air force base, USA. Flew 2000 miles with various air refuels.

During the **RED FLAG 2012** the Colombians with the modernized Kfir's have achieved superb results both in Air to Ground putting bombs on target and Air to Air, shooting down newer 4th generation fighters!

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The Kfir's main characteristics:

- **Supersonic, MACH 2+ Fighter aircraft**
- **High maneuverability, Multi-Role**
- **Beyond Visual Range (BVR) capabilities in A/A and A/G to include Piton 5, Derby (similar capabilities to AMRAAM), GPS Guided, Laser guided and TV guided autonomous bombs.**
- **Impressive carriage capability, 9 stations for operational flexibility = Efficient fuel/armament mix, Wide range of weapons compatibility & 5.5 Tons Payload**
- **Aerial refueling for extended missions**
- **State of the art Avionics, Radar, weapons**
- **Open architecture – Customization, adaptation**

Advanced Multi role operational results:

- **All weather, Day & Night, Long-range, air refueling capability, precision**
- **A/A, A/G, A/Sea missions**
- **Intelligence & surveillance**

Lahav has over forty year's military aircraft experience supporting the Israel Air Force (IAF) and other air forces from around the world. Lahav proven experience upgrading military aircraft has enabled IAI to tailor the Kfir Block 60 avionics, to meet the requirements of the future battlefield.

Kfirs Block 60

- **The combat edge comes from <u>systems & weapons</u>**
- **First to detect and acquire in A/C systems, First to shoot, First to kill**
- **Sensor Fusion**
- **Latest generation Active Electronically Scan Array (AESA) radar**
- **Link 16**
- **Net centric**

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- **Tactical Situation Display (TSD) to include Info from advanced Radar, Advanced Data link (targets, allay formations and wingmen, formation data), EW systems data, Digital moving map, zones and threats, RWR and more.**
- **Data link based cooperation in Air to Air and Air to ground**
- **Fully NATO compatible**
- **9 stations**
- **BVR and 5th Gen IR (Piton 5) missiles**

- **A/G – LGB, GPS guided, Autonomous TV guided**
- **Full glass cockpit**
- **Short delivery**
- **Similar results as new 4th Gen aircraft - <u>At a 1/3 of the price</u>.**
- **Long term affordability – 1/4 of 4th Gen aircraft maintenance costs**

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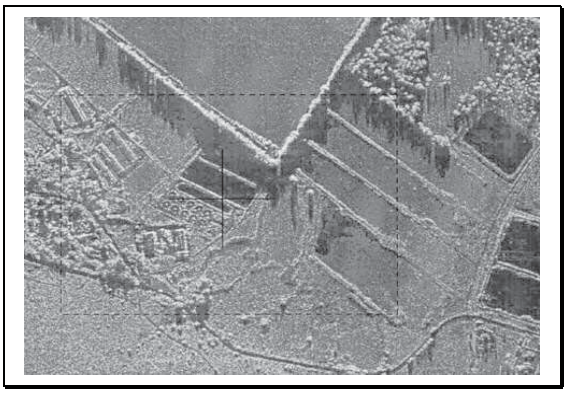

Examples of SAR Ground Mode

Kfir Block 60's Glass Cockpit

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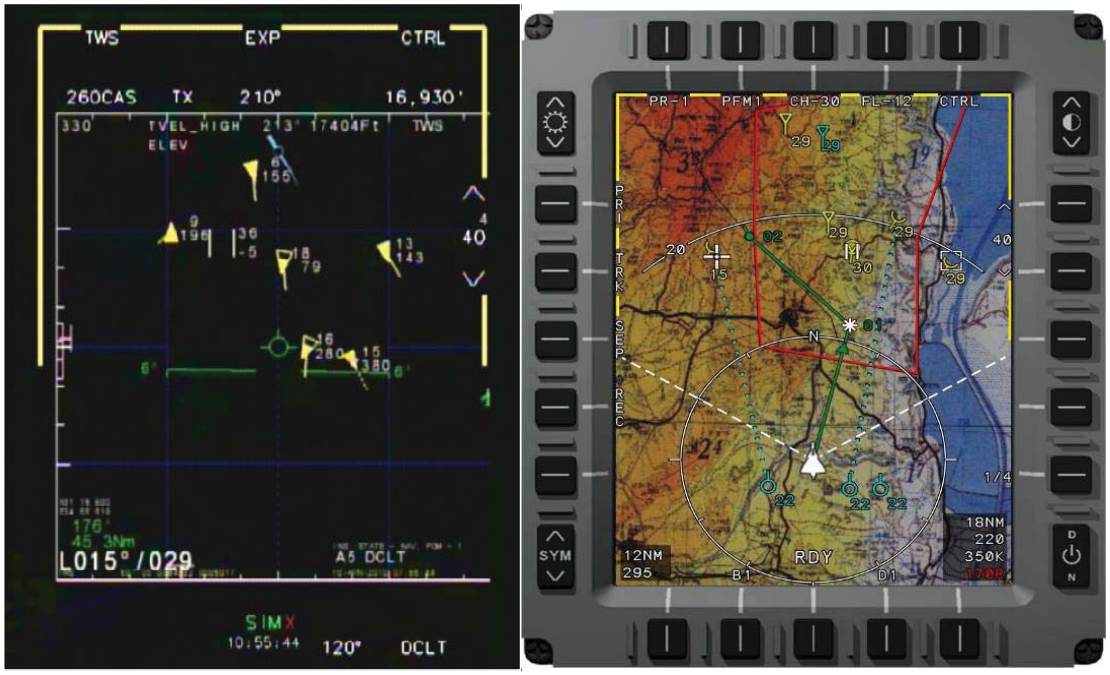

Air-to-Air Multi Target Scan & Tactical Situation Displays

Kfir Block 60 Armed and Ready for Multi-Role Operational Mission of Precise A/G with LGB, Targeting Pod, and A/A with 2 BVR missiles, and 2 WVR missiles

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ISRAEL AEROSPACE INDUSTRIES

LAHAV DIVISION

LAHAV - Advanced Multi-role Fighters Manufacture

Aircraft Manufacturer

Avionics system development & integration

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LAHAV DIVISION

- Comprehensive Military Aircraft manufacture & upgrade Capabilities
- Designer & Manufacturer of Kfir Aircraft
- Supplier of advanced systems to IDF
- Data Link on all IAF fighters
- Advanced systems & weapons Development & Integration

IAI LAHAV DIVISION

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LAHAV EXPERTISE – AIRCRAFT

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HELICOPTER UPGRADES

- Bell UH-1H/205, 212, 412
- Black Hawk
- Mi-24/35
- Mi-8/17
- Apache
- CH-53
- Ka-32
- ALH

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Colombia Air Force Upgrade

- Provided to customer with 8000 hours flight potential on body, systems
- Full wiring replacement Other systems as required
- Updated Avionics & Sensors designed in 2010

IAI LAHAV DIVISION

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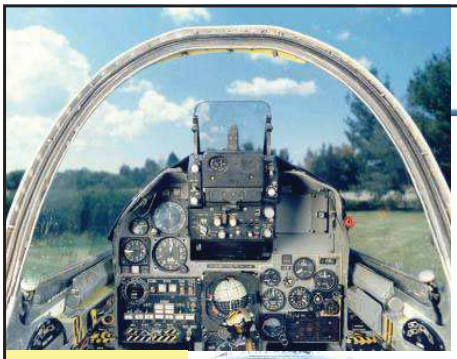
Colombia Air Force Upgrade

- 24 Aircraft
- 80-120% of 4th Gen. A/C (such as F16 block 52, Eurofighter, Rafal, MIG-29) capabilities
- Development, Integration of new armaments, sensors, 100 flight tests
- 3 years – full delivery !
- Operational



Kfir C-2

Kfir C-7

F-16A

F-16C

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Kfir Block 60

F-16 I

Similar Capabilities

1/3 in procurement and maintenance prices!!

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KFIR block 60 Highlights

- Supersonic, MACH 2+ Fighter aircraft
- High maneuverability, Multi-Role
- Beyond Visual Range (BVR) capabilities in A/A and A/G
- Impressive carriage capability, 9 stations for operational flexibility
  - Efficient fuel/armament mix
  - Wide range of weapons compatibility & 5.5 Tons Payload
  - Targeting Pod
- Aerial refueling for extended missions
- Glass Cokpit

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KFIR block 60 Carrying Capabilities

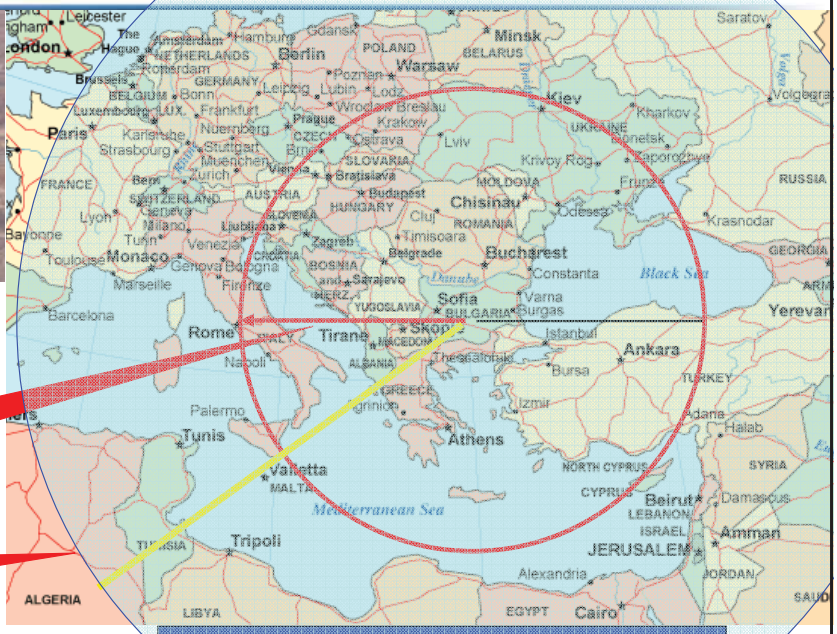
5.5 tons

9 Station

30mm guns

This document contains proprietary

Ground Attack operational radius



KFIR
540 NM
1000 Km

1 Air refuel
1100 NM

High profile Air to Ground mission with 3 Fuel Tanks 4 x 250Kg bombs

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KFIR block 60

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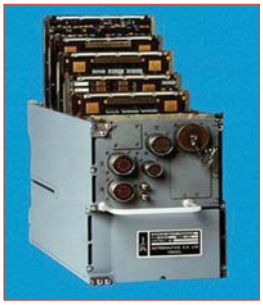
KFIR Block 60

- State of the art Avionics, Radar, weapons
- Open architecture – Customization, adaptation
- Advanced Multi role operational results:
  - All weather, Day & Night, Long-range, air refueling capability, precision
  - A/A, A/G, A/Sea missions
  - Intelligence & surveillance

KFIR AVIONICS SUBSYSTEMS

- Accurate Navigation & Weapon Delivery
- EGI- Embedded GPS/INS
- Multi Function Color Display (MFCD)
- Up Front Control Panel (UFCP)
- Head Up Display (HUD)
- Mission and Display Processor (MDP)



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IAI Radar and DL operational enhancements

- Tactical Situation Display (TSD)
- Missiles and sensor slaving

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Kfir Block 60 Advanced Multi Role Fighter

Movie

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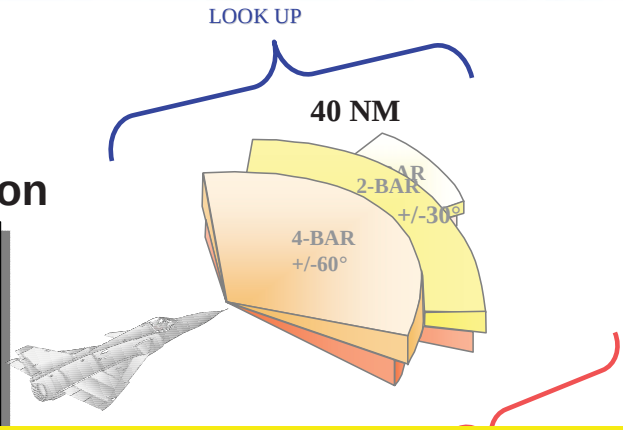
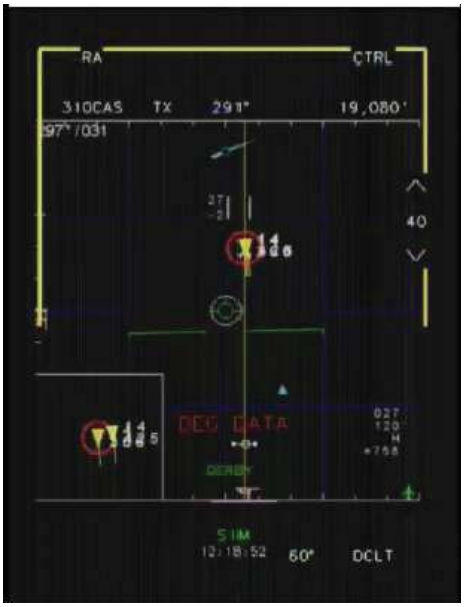
KFIR block 60 Radar

- Multi-Role Fire Control Radar (EL 2032)
- All Weather/Day Night Detection & Identification



- The combat edge comes from systems & weapons
- First to "see" in A/C systems, First to shoot, First to kill
- Platform should have: Reliability, Range, Load, Modern Systems

Air Air Radar



Up to 64 Tgts with elevation, Velocity and vector in TWS

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A/G High Resolution SAR Radar

Optical Sensor image

A/G High Resolution SAR Radar images

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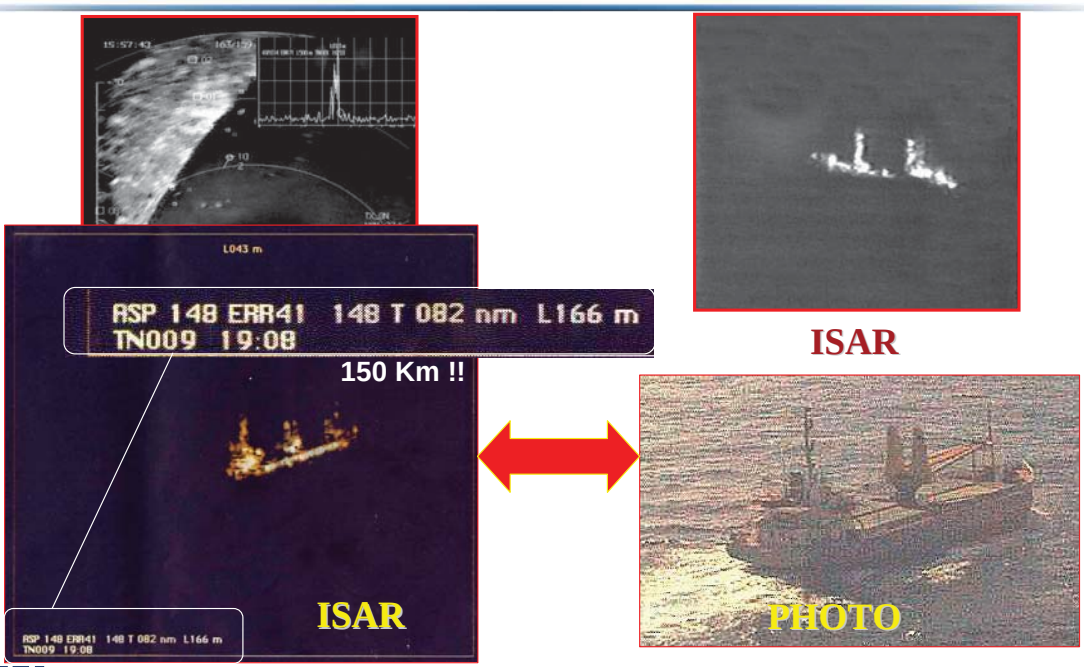
SEA TWS, RS & ISAR



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Operational Example Border/Sea Control

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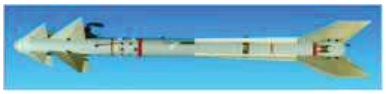
Kfir Block 60 Air to Air Weapon capabilities

- **Latest generation Air to Air missiles are integrated on the Kfir providing edge advantage in Air Defense**

A/A- Helmet Sight & Display

Short range



- **Python 4/5**
- **Look & Kill**
- **Shoot & Forget**

Long range Derby

- **BVR**
- **Active**

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Kfir Block 60 A/G Weapon capabilities

Targeting Pod

A/G- Autonomous Bombs

JDAM

SPICE

LGB

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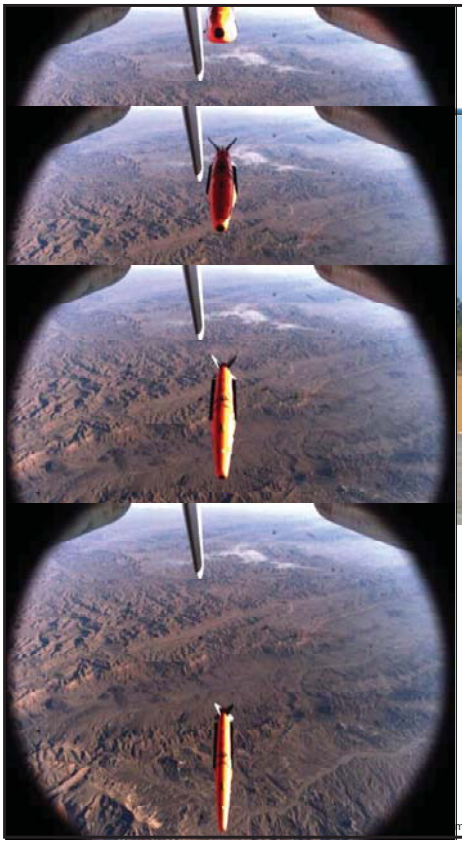

A/G Weapons…

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Operational enhancements

- **Air to Air**
  - Infra Red & Electro Magnetic (BVR) Missiles
  - Easy Acquisition of Targets
  - Precise A/A Gunnery
  - Head Out Flight
- **Air to Ground**
  - Accurate Day/Night Navigation
  - Precise Weapon Delivery
  - Reduced Pilot Workload
  - All Weapons Capability
  - All weather

IAI LAHAV DIVISION

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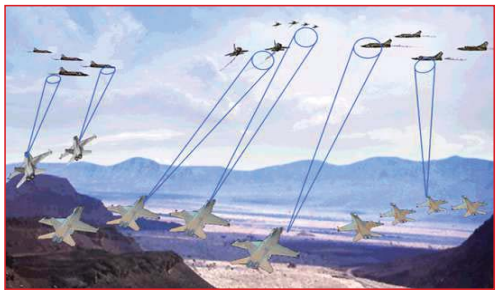
IAI Data Link

- IAI is the sole supplier of Israeli Air Force data link systems for the F-15, F-16, F-35
- More then 18 years data link proven experience
- International proven datalink programs
- **Link 16 integration capability**



Hundreds flying DATA LINK Systems

KFIR Maintenance Concept

- Low maintenance costs and high aircraft availability
- Western Maintenance concept Highly reliable systems
  - Turn around time 30 min.
  - No body & wing cracks for 8000 h
  - Engine 8000 hours life span
  - **Unlimited** number of Overhauls

30 years flight Potential

Guaranteed Long Term Support

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Support by Original Manufacturer

- IAI is the original manufacturer of the Kfir with established efficient support for all operational and logistic needs
  - Spare Parts
  - Support Equipment
  - Repair Services
  - Technical Assistance
  - Training
  - Documentation
  - Maintenance knowledge transfer
  - Long term Integrated Logistics support by manufacture (IAI)

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Advanced relaiable Affordable Fighter

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Kfir Block 60 Advanced Multi Role Fighter

- Easy to operate, and superb results
  - Full glass cockpit
  - Man Machine interface
  - IAF pilots design
  - Integration =

    S Y M P H O N Y
- Advanced Sensors
- IAI/Elta Powerful Radar
- Advanced DL & ECM

80 - 120 % of 4th gen * aircraft

FIRST TO "SEE", FIRST TO SHOOT, FIRST TO KILL

* 4th Generation aircraft – F16 blocks 40- 52, Rafal, Eurofighter

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Kfir Block 60

- EASA Radar
- Fully NATO compatible
- Link 16
- BVR and 5th Gen IR (Piton 5) missiles
- A/G – LGB, GPS guided, Autonomus TV guided
- Full glass cockpit
- Short delivery
- RFP's – Similar results - **At a 1/3 of the price**

Enhanced Capabilities, Cost Effective Solution

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ISRAEL AEROSPACE INDUSTRIES

LAHAV DIVISION

IAI F-16 CAPABILITIES

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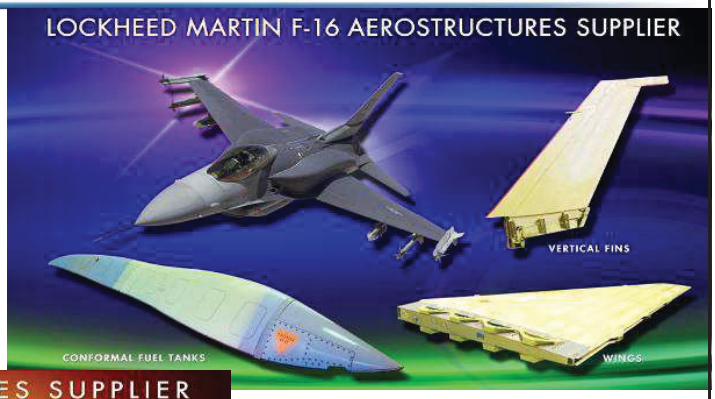
AEROSTRUCTURES /BUILD TO SPEC / ELECTRICAL HARNESSES

- Sole source for major F-16 & F-15 Aerostructures
- Boeing preferred supplier



- USAF F15 rewiring
- *New!* T38 wings
- *New!* F-35 wings

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F-16 A/B/C/D Falcon Up Star & Slip

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FAC KFIR C-10
Advanced Multi-role Fighter
Red Flag 2012

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Colombian Air Force Kfirs in Red Flag

- ✓ Independent deployment
  - 2000 Miles
  - 130 people
  - 8 Kfir MRF
  - Refueling

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Red Flag

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Kevin Jackson

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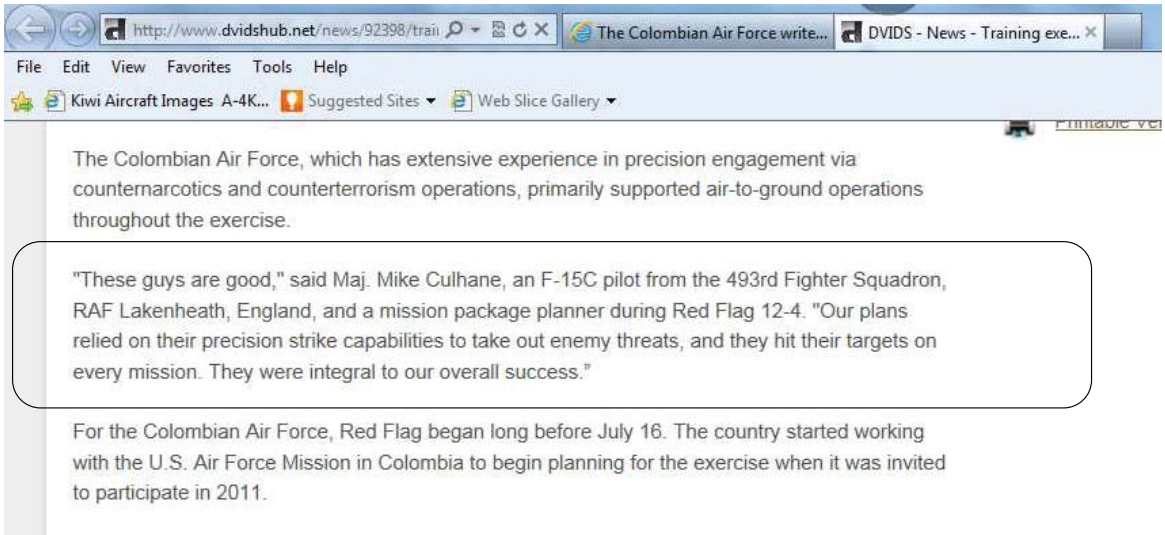
Air Information
Communication Medium
Human Rights
Our friends write...
Personnel Recovering National Center
Strategic Planning
Personalize
Additions
Aerospace Museum
FAQ
The Air Force´s Second Commander in Red Flag 2012
July 17, 2012
Coronel Liliana Alarcón Guarín
Major-General Mr. Flavio Ulloa Echeverry, Second Commander and Major State´s Chef from the Colombian Air Force, travelled to the Air Base in Nellis-Arizona, in order to verify, supervise, and accompany every aspect related to the Institution´s participation in Red Flag´s exercise.
At the same time, in the ramp of Nellis Air Base, they took off 48 airplanes belonging to the Arab Emirates, United States and Colombia, between we find F16 airplanes, F15, A10 c, among others.
These type of missions, simulate a regular war scene between two sides, named Packet Attack, that is guided against land objectives, that is made between the coalition among several countries and an enemy one.
122%

Red Flag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The Colombian Air Force, which has extensive experience in precision engagement via counternarcotics and counterterrorism operations, primarily supported air-to-ground operations throughout the exercise.
"These guys are good," said Maj. Mike Culhane, an F-15C pilot from the 493rd Fighter Squadron, RAF Lakenheath, England, and a mission package planner during Red Flag 12-4. "Our plans relied on their precision strike capabilities to take out enemy threats, and they hit their targets on every mission. They were integral to our overall success."
For the Colombian Air Force, Red Flag began long before July 16. The country started working with the U.S. Air Force Mission in Colombia to begin planning for the exercise when it was invited to participate in 2011.

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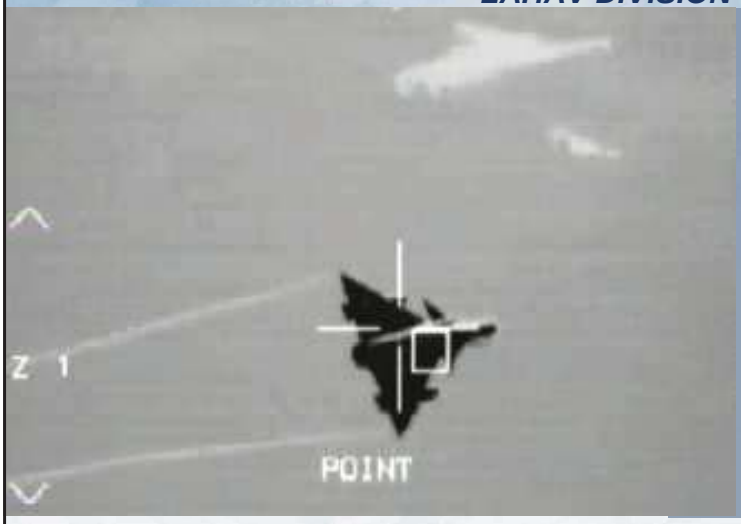
ISRAEL AEROSPACE INDUSTRIES

LAHAV DIVISION



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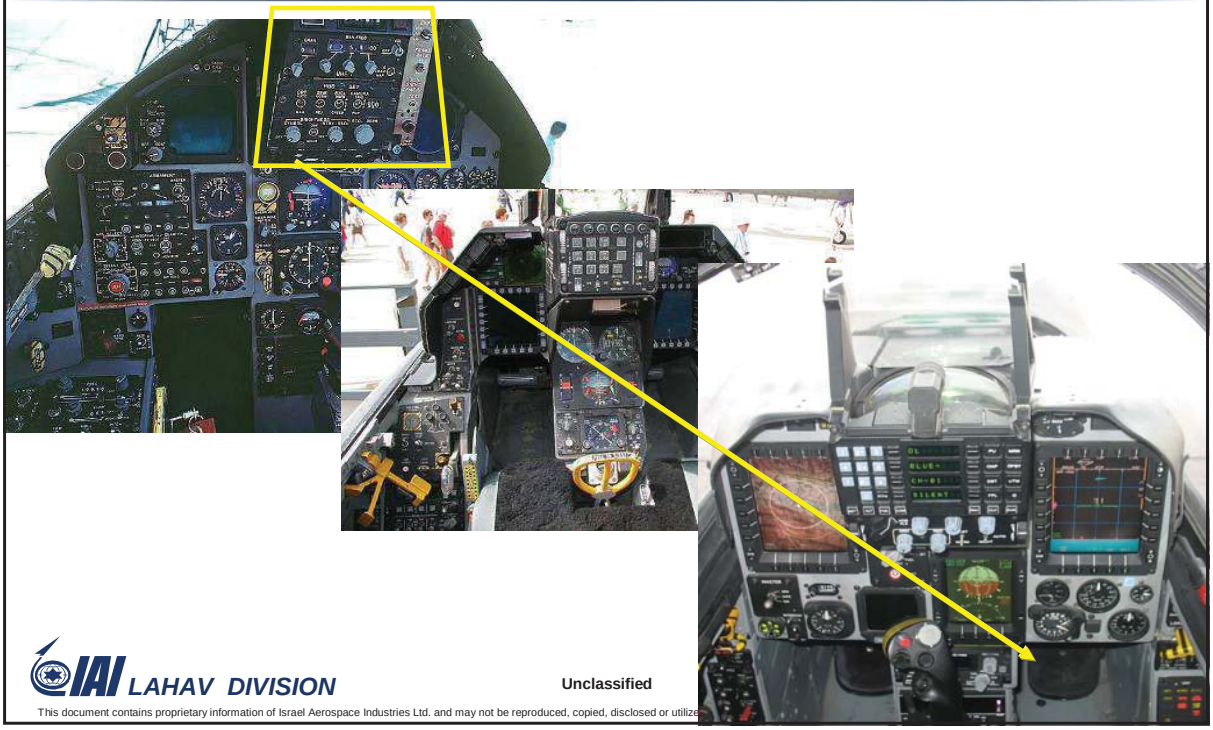
Up Front Control generations



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Up Front Control Display (UFCD)

- THE NEED and benefits -

  Improved systems operation and flight Safety
- **Unique product** combining UFC + Display + Computer + HMI
- Optimal display location in cockpit (centric, high)
- Crucial tactical flight data in **center of pilot's attention**
- Pilot workload reduction, Improved & enhanced pilot SA

- The UFCD is FFF tested for F15 A/B/C/D cockpit by end user

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